

# **CRA-WP**

## **Postdoc | Job Search**

**Soha Hassoun, Tufts University**  
**Cynthia Phillips, Sandia National Labs**



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# Who is in the audience?

- Postdocs?
- How did you find the job?
- Who interviewed for the position?
- Who gave a talk?
- Who had options other than the post doc?
  - Permanent jobs? Teaching? Research?
- Why was the postdoc your choice?



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# Topics Covered

- The Landscape - know what you want
- Where to apply?
- The application
- The interview: preparing, the big day(s)
- Post Interview: waiting, deciding, negotiating
- Parting Tips



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# The Landscape of Positions



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# The Landscape

What kind(s) of position are you looking for?

- Research university? Research lab (government or industry)? Liberal arts college? Second Post-doc? Development? Start-up?

What type of environment do you want to you work in?

- Small or big department? Join established research group or start one?

Where to live? (and any significant other)

- West coast? East? Midwest? South? Urban? Rural? International?

**Confused? Apply & interview for various positions**



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# A Second Post Doc Position

Consider if you had a one-year at your PhD institution or **special opportunity**

Example: National Laboratories **named postdoc fellowships**

- Sandia: Truman or Hruby fellowships: 3 years to work on research you propose, much better pay than regular postdoc, prestige within the lab, very likely to become full position if you want. Very competitive.
- Sandia von Neumann fellowship (for computing): half-time your own research and half-time with a current project
- Other major named fellowships (C = computing): Vigner, Weinberg, Russell, Householder (C) at Oak Ridge; Lawrence and Fernbach (C) at Lawrence Livermore; Alvarez (C) and Hopper (C) at Lawrence Berkeley Lab; Massey, Mayer, Wilkinson (C), Butler (C) at Argonne.



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# University/College Positions

Type	Degree Program	Emphasis	Important
Research Universities (R1)	BA, BS, MS, PhD	Research	Teaching and Service
Colleges/Universities	BA, BS, MS maybe PhD	Teaching	Research & Service
Selective Liberal Arts Colleges	BA, BS	Teaching & Scholarship	Service & Research



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# Research University Expectations

**Publications** – journals, conferences (top peer-reviewed)

**Funding** to support research groups and summer salary

**Graduate student training** (and professional success)

**Reputation and impact**

- Leader in your profession.
- Higher in rank: more visibility and international reputation – invited talks, conference organization, journal/editorial boards, professional organization roles.

**Maybe**

- MS/Undergraduate research mentoring
- Patents, software artifacts, etc



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# Research Faculty

## Rewards

- Easier to get a position if you can cover most of your your salary
- Potential solution to 2-body opportunity
- Varies, but often same access as tenure-track to research resources (advising PhD students, lab space, etc.)

## Challenges

- Funding sources that pay full salary are limited
- Usually, several projects needed
- Less stability (not tenure-track)



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# Teaching Focused Position

## Rewards

- Impact students lives and careers
- Less multitasking, travel, stress
- University community and research opportunities
- Tenure track at Teaching Focused Institutions
- Many opportunities with booming enrollments

## Challenges

- Tenure track vs non-tenure track everywhere else
- Non-tenure track: Less prestige, sometimes pay, and job security



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# Research University: Teaching

Teaching Load: typically 1:1 to 1:2

Mix of undergraduate and graduate courses  
from introductory undergraduate to core graduate  
course to research seminars

Teaching assistants for grading, office hours, etc.

Involve undergraduates in research



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# Teaching Primary Positions

2 or more classes per term

Work closely with undergraduates and curriculum

Colleges and teaching primary Universities

- Professor (assistant, associate, full) with tenure
- Lecturer

## Teaching track at Research University

Many different types/titles w/wout tenure

Teaching Professor

Professor of the Practice, Clinical Professor, Lecturer w/SOE (CA)

Lecturer, Senior Lecturer



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# Government and Industry Labs

## Rewards

- Research that impacts country or industry
- Industry: higher pay
- No teaching (if you consider that a plus)
- Your team includes other PhDs and experts
- Can be easier to do multidisciplinary research at government labs

## Challenges

- Somewhat less job security (no tenure)
- Fund raising
- Less independence on choosing problems



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# The Application



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# Where to Apply

- Identify “stretch”, “eye-level”, and “safety” positions
- Check ads: CRA, CACM, IEEE Computer, departmental websites
- Apply if the call mentions all areas
- Certain research areas can match the hiring goals for more than one department (e.g., CS, ECE)
- Keep an open mind! You might be surprised what you end up liking the best



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# Your Application

- Cover Letter
- Curriculum Vitae (CV) - updated!!
- Research Statement (2-3 pages)
  - What are your key contributions? What is your vision for your future research?
- Teaching Statement (only academic, 1-2 pages)
  - What is your vision? What do you want to teach? How do you create an engaging classroom?
- Diversity statement?
- Letters of recommendation (3-5 people)



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# Identifying Letter Writers

- Letters are very important
- With your advisor, choose people who are
  - Familiar with your research
  - Respected in the research community (preferably, full professors or established research leaders)
  - Expected to write a meaningful and positive letter
- Consider (in addition to advisor)
  - Members of your research community with nearby research
  - Internship advisors
  - Members of your thesis committee
  - Other professors at your institution
- Give letter writers a copy of your application material



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# The Selection Process

- Some departments/labs ask for letters for all applicants, others only for the selected ones
- Some departments will let you know that there is a “no match,” but often you will not hear *anything*
- Few applicants will be invited for an interview
  - Telephone interviews are becoming more common (very common for teaching institutions and labs)
- Differences:
  - Four-year institutions may start earlier than research universities
  - Government lab hiring may be slow, but year round



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**Congrats – you’ve got an  
interview!**

**Your goal(s)?  
Their goal(s)?**



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# Preparing for an Interview

- Do your homework – understand the organization!
  - Know the research areas and accomplishments of the people you will meet; prepare questions for **them**.
  - How might your research capabilities complement and integrate with the organization/department?
  - What role does the group/department play in the institutional structure?
  - Why are you interested?
  - Are your answers consistent with your statements?



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# Typical Interview

- 1-2 days
  - the talk, one-on-ones, meet Chair/Dean, student meetings, food)
- They will ask questions
- You will ask questions
- Demonstrate good social skills and how you fit with the department



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# The Job Talk

## Preparing your Talk

- Provide enough background so people outside your area of research can follow
- Clearly state the problem and identify your specific contributions
- Show you understand any limitations of your approach and/or your results
- Thank collaborators
- Include future research ideas

## Tips

- Get input from your advisor
- Give practice talks to a wider audience at your institution
- Consider any feedback you get
- Get the audience to ask questions, even weird ones, and to play difficult personalities
- Video your talk and (gulp!) watch it
- Practice, Practice, Practice



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# After the Interview

- Evaluate how it went – revise your materials if necessary
- Discuss with mentors/advisor/peers
- Follow up with anything you said you would do
- Send notes thanking people you particularly enjoyed talking to
- Okay to contact the chair/lead if you have another offer or to follow up



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# An offer!



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# Negotiating an Academic Offer

## Resources, \$\$, ...

- Salary
- Start-up package: student support, summer salary, travel funds, lab and student space, travel, etc
- Subsidized housing, moving expenses

## Starting date and time till tenure

- A January start may buy you extra time on the tenure clock
- Tenure clock issues (clock credit, clock stoppage)
- Pre-tenure sabbatical?

## Teaching

- Teaching load reduction
- 1<sup>st</sup> year teaching assignment

## Other

- Help with obtaining an H1-B visa (if you're non-US)
- Partner placement assistance
- Child-care facilities/cost



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# Negotiating an Industry Offer

## Compensation

- Salary
- Signing bonus
- Equity (stock)
- moving expenses

Starting date, Pre-planned time off, etc..



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# Negotiating Tips

- One school of thought
  - If you never hear “no”, you’re not asking for enough
- Another
  - Don’t upset them; they will think badly of you
- Look up comps
- Evaluate the situation
- Ask for advice on phrasing things positively when asking



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# Parting Tips



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# 2-Body Opportunities: When to tell?

## In the cover letter

- Useful only if it involves two academic positions
- If it involves a different department, it allows the departments to explore options early

## After invited for an interview

- They have already decided they are interested in *you*
- Make it clear what you will accept

## During the visit

- Can discuss your needs and the options
- Can be distracting to the interview (consider only discussing with head/chair)

## When an offer is made

- There may not be enough time



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# What is Often *Not* Said

- Academic research positions provide the most flexibility in terms of future options
  - Often difficult to move from a teaching position to an industrial position
  - Often difficult to move from a teaching or industrial position to a faculty position
- Most faculty get tenure
  - Most departments hire expecting/hoping to award the person tenure
  - Hiring and mentoring of junior faculty is expensive, in time and money



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GOOD LUCK!



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# Activity

Get with a partner and practice negotiating. One of you is the chair, one of you is the potential hire. The chair should say no to something:

Negotiation scenario: You have a higher salary offer from X University, ask the department chair to match it.

You need special equipment, ask for it.

Your partner also is graduating, see if they will interview your partner.



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